REMARKS

Claims 1-23 and 26 are pending in the application. Claims 5-7 have been amended and claims 20-25 have been cancelled.

The specification has been amended to change the unit designation for the coefficient of linear thermal expansion from "in/in/°F" to the algebraically equivalent unit designation "in/in°F." No new matter has been introduced by the amendment.

Restriction Election Correction

In the restriction requirement issued April 4, 2002, the applicants' claims were restricted to Group I including claims 1-9 and 26 directed to a machine, and Group II including claims 10-25 directed to a method of making a machine. (Office Action, p.2). Original claims 20-25 were, however, directed to a machine and not to a method of making a machine. Accordingly, in the Office Action of April 4, 2002, claims 20-25 should have been indicated as corresponding to Group I.

In response the restriction requirement, the applicants elected the claims corresponding to Group II. (Response, Oct. 3, 2002, p. 3). The applicants further amended claims 1-9, and 26 to bring the claims within Group II. Claims 20-25 were not amended and, accordingly, still fall within Group I. Since claims 20-25 do not correspond to claims within the elected Group, the applicants hereby cancel claims 20-25 without prejudice in view of their correspondence to non-elected Group I.

Drawing Objection

Fig. 1 of the drawing has been objected to for failure to identify the illustrated structure as prior art. Accordingly, the applicants submit herewith a corrected formal drawing in which the legend "Prior Art" is added to Fig. 1.

Rejection Under 35 U.S.C. § 112, first paragraph

Claims 5-7 have been rejected for the use of "in/in/°F" to designate units for the coefficient of linear thermal expansion. This rejection is believed overcome in view of the amendment of claims 5-7 to change the unit designation to the algebraically equivalent unit "in/in°F." The applicants respectfully assert that the exchange of algebraically equivalent units does not alter the ability of one skilled in the art to fully comprehend claims 5-7. The applicants have, nevertheless, amended claims 5-7 in accordance with the recommendation of the Examiner. The applicants further assert that this amendment does not alter the scope of claims 5-7 in any way whatsoever.

In accordance with the change in unit designation recited in claims 5-7, the applicants have amended their specification to correspond with the amendment of claims 5-7.

Rejection Under 35 U.S.C. § 102(b)

Claim 24 has been rejected over Hsu. This rejection is now moot in view of the cancellation of claim 24.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-2, 10-11, 13-23, and 26 have been rejected over Hsu in view of Dunfield et al. This rejection is believed overcome in view of the following remarks. Claims 10 and 17 are directed to a method of making a stator assembly and to a method of making a motor that includes providing a linear core preform. The preform has two end surfaces. A toroidal core is formed by bringing the end surfaces of the core preform together. The toroidal core is then substantially encapsulated to form a stator assembly. The applicants respectfully assert that the process recited by claims 10 and 17 is not suggestive or disclosed by the cited references, taken alone or in combination.

Hsu differs from the claims invention by teaching the fabrication of a stator by substantially mechanical means. Hsu uses root portions (112) to engage recesses (102) in the annular core (100). (*See* Hsu, Figs. 6-8, col. 2, ll. 56-66,

col. 3, ll. 1-8). Hsu further teaches securing core (100) on stem (21) of the stator holder (2) by a retaining disk (15) and bolts (16). In addition to teaching the formation of a stator assembly through mechanical engagement of a rolled laminate, Hsu also teaches the formation of hinge portions (114) in the laminate to link fin members (11) of corresponding fin arrays (110A) together. (*See* Hsu, Figs. 3 and 6, col. 3, ll. 33-43). Creasing the laminate enables the fin array assembly (110A) to be bent into a circular geometry. Accordingly, Hsu does not suggest or disclose a process forming a toroidal core by bringing end surfaces together and encapsulating the toroidal core as recited in applicants' pending claims.

The applicants respectfully assert that the addition of Dunfield et al. does not compensate for the deficiency of Hsu. The applicants respectfully assert that the adhesive material (78) described by Dunfield et al. cannot perform the structural function of an encapsulant as recited in the applicants' pending claims. Further, Dunfield et al. do not suggest or disclose bringing ends of a core preform together and encapsulating the ends to form the toroidal core.

In view of the intricate mechanical engagement to form the core (100) as taught by Hsu, the applicants respectfully assert that one skilled in the art would not be motivated to selectively apply the structurally inadequate adhesive disclosed in Dunfield et al. to somehow secure the ends of the Hsu laminate together. The applicants assert that obviousness cannot be established absent some motivation to combine the teaching of the references and that motivation must come from the references themselves, and not from the applicants' disclosure. The stator assembly disclosed by Hsu is an intricately engineered mechanical assembly and does not invite additional adhesive compounds to secure the components in place.

Claims 1-9 and 11-16 depend from claim 10 and recite further limitations to the process of claim 10. These claims are believed allowable in view of the remarks pertaining to claim 10.

Claims 18-19 and 26 depend from claim 17 and add further limitations to claim 17. These claims are believed allowable in view of the foregoing remarks pertaining to claim 17.

Claim 3 has been rejected over Hsu in view of Dunfield et al. and further in view of Kessens et al. This rejection is believed overcome in view of the following remarks.

Claim 3 depends from claim 10 and recites materials of construction and material attributes for the stator core preform. The foregoing remarks pertaining to Hsu and Dunfield et al. are incorporated by reference herein. While Kessens et al. discloses a metal stator core 15, Kessens et al. does not suggest or disclose a process that includes forming a toroidal core by bringing end surfaces together and encapsulating the toroidal core. Accordingly, claim 3 is believed allowable over the combination of cited references.

Claim 4 has been rejected over Hsu in view of Dunfield et al., Kessens et al., and Nakamura et al. This rejection is believed overcome in view of the following remarks.

Claim 4 depends from claim 3 and recites that the phase change material has a coefficient of linear thermal expansion that is similar to the coefficient of thermal expansion of the metal laminations. The remarks pertaining to Hsu, Dunfield et al., and Kessens et al. set forth above are incorporated by reference herein. While Nakamura et al. disclosed various thermotropic LCP resin compositions, there is no suggestion within Nakamura et al. that a toroidal core be formed by bringing first and second end surfaces into contact with each other and encapsulating the toroidal core. The applicants further assert that the filled resins lack the requisite strength to function as the claimed encapsulant. For example, Nakamura et al. disclose a stator enclosed by frame (11) (Fig. 1) and frame side plates (14a) and (14b) and a can (5) (Fig. 2). There is no suggestion that the filled resin is structurally sufficient to form the core assembly without mechanical assistance. Accordingly, the applicants assert that claim 4 distinguishes over the cited combination of references.

Claims 5-8 have been rejected over Hsu in view of Dunfield et al. and further in view of Nakamura et al. This rejection is believed overcome in view of the following remarks.

Claims 5-8 each depend from claim 10 and recite specific physical properties of the claimed phase change material. The foregoing remarks pertaining to Hsu, Dunfield et al., and Nakamura et al. are incorporated by reference herein. Accordingly, the applicants assert that claims 5-8 distinguish over the cited combination of references.

Claim 9 has been rejected over Hsu, Dunfield et al. and Yoneshige. This rejection is believed overcome in view of the following remarks.

Claim 9 depends from claim 10 and recites that the phase change adhesive comprise polyphenyl sulfide. The foregoing remarks pertaining to Hsu and Dunfield et al. are incorporated by reference herein. While Yoneshige discloses the encapsulation of windings, there is no suggestion within Yoneshige for forming a toroidal core by bringing ends together and encapsulating the toroidal core. Accordingly, the applicants assert that claim 9 distinguishes over the cited combination of references.

Claim 12 has been rejected over Hsu in view of Dunfield et al. and further in view of Iwaki et al. This rejection is believed overcome in view of the following remarks.

Claim 12 depends from claim 11 and recites that rolling of the core preform is carried out by a roll forming machine. The applicants' foregoing remarks pertaining to Hsu and Dunfield et al. are incorporated by reference herein. While Iwaki et al. discloses the forming of a wound core, there is no suggestion to form a toroidal core by bringing the ends together and encapsulating the toroidal core. Accordingly, the applicants assert that claim 12 distinguishes over the cited combination of references.

The rejection of claims 20-23 is now moot in view of the cancellation of these claims.

Claim 25 has been rejected over Hsu. This rejection is now moot in view of the cancellation of claim 25.

The additionally cited references have been carefully examined and found not to be relevant to the applicants' claimed invention.

The applicants have made a novel and nonobvious contribution to the art of stator assembly and motor fabrication. Their pending claims distinguish over the cited references and are in condition for allowance. Accordingly, such allowance is now earnestly requested.

Respectfully submitted,

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